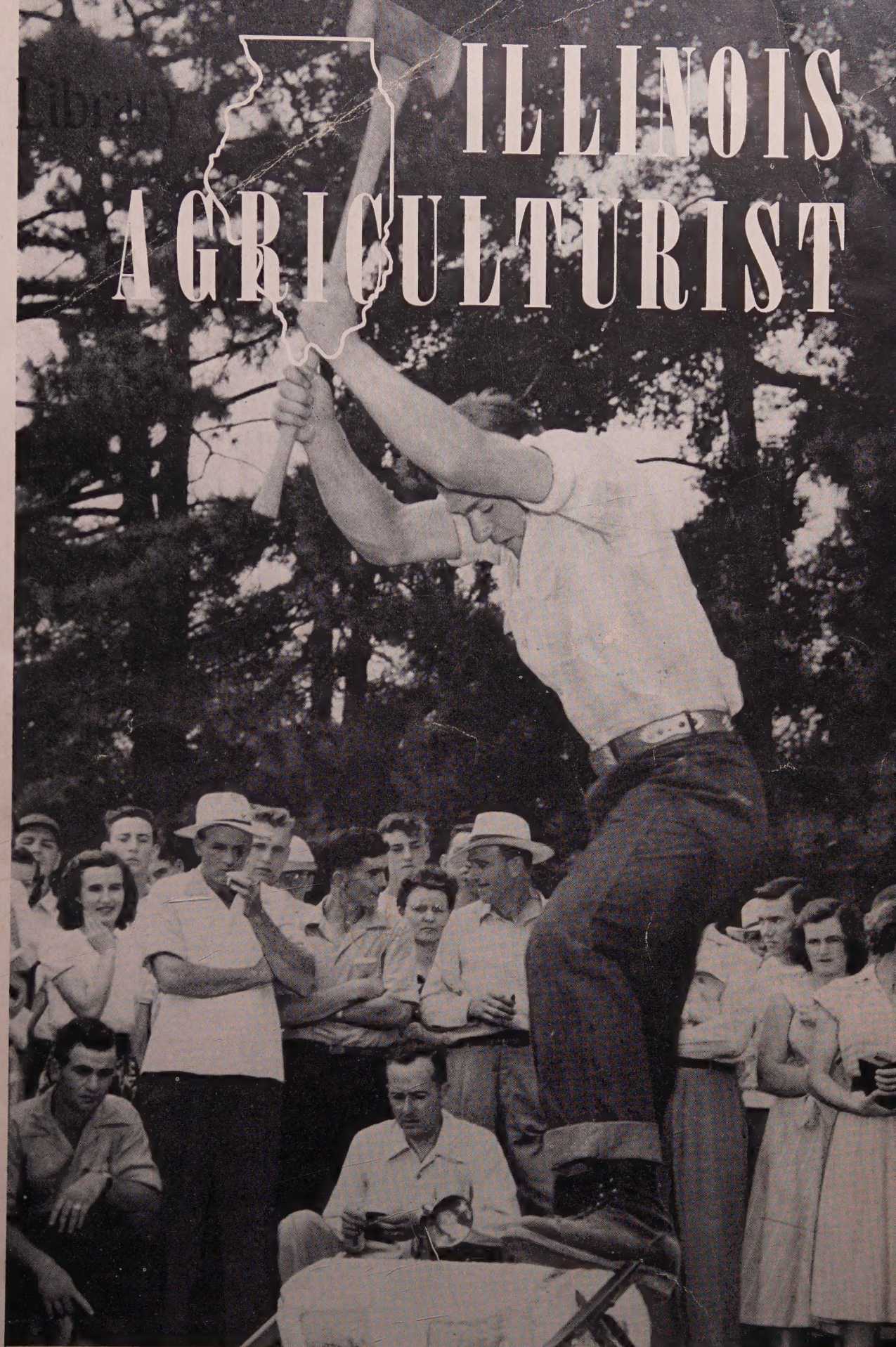


Illinois U

ILLINOIS AGRICULTURIST



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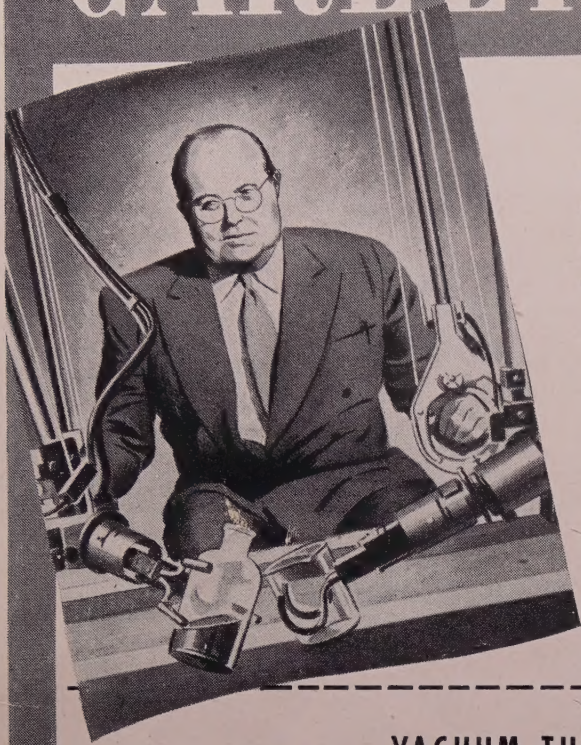
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CAREERS AT GENERAL ELECTRIC



General Electric is not one business, but an organization of many businesses, offering opportunities in virtually all the professions. Here three G-E men brief the career-possibilities which the company offers to the mechanisms expert, the vacuum-tube specialist, and the engineer.

MECHANISMS EXPERT

John Payne (Cornell), who developed the mechanical hands for atomic research: Radioactive isotopes create problems to delight the heart and fire the imagination of any mechanical or electrical engineer who has a bent toward mechanisms. Developing pile "service" mechanisms and manipulating devices like the remote-control hands is tied in with a lot of existing techniques, but the special conditions offer a real challenge—and a real opportunity—to the engineer.

VACUUM-TUBE SPECIALIST

Dr. Albert W. Hull (Yale), assistant director of the Research Laboratory: The use of vacuum tubes for controlling industrial processes is only beginning. A new tube with a "dispenser cathode," for example, can take signals from "electrical brains" and apply them to apparatus of any desired size . . . Also, a new thyatron gives mastery over high-voltage currents as high as 40 amps at 70,000 volts. Such developments will foster the use of vacuum tubes as engineering tools and electronic servants.



STUDENT ENGINEER

Bob Charlton (Texas), graduate of the G-E Advanced Engineering Program: I have just completed three years of intensive engineering study on a level with the best graduate schools. Besides my experience "on the job," I've studied 20 hours at home each week. The first-, second-, and third-year courses are tough and realistic—the problems actually come from engineering divisions. I don't know of a better way to get a thorough technical background for an engineering career in industry.

For further information about a BUSINESS CAREER with General Electric, write Business Training Course, Schenectady, N. Y.—a career in TECHNICAL FIELDS, write Technical Personnel Division, Schenectady, N. Y.

GENERAL  ELECTRIC

Illinois U Library



*There's something here
no photograph could show*

Pictures could convey a clear idea of the buildings of Standard Oil's new research laboratory at Whiting, Indiana. We could also photograph the many new types of equipment for up-to-date petroleum research that are housed in the laboratory, one of the largest projects of its kind in the world.

Or we could photograph the men who work here, many of whom have outstanding reputations in their fields. For many years, Standard Oil has looked for and has welcomed researchers and

engineers of high professional competence. We have created an intellectual climate which stimulates these men to do their finest work.

But no photograph could show the basic idea that motivates Standard Oil research. It is simply this: our responsibility to the public and to ourselves makes it imperative that we keep moving steadily forward. The new Whiting laboratory is but one evidence of Standard Oil's intention to remain in the front rank of industrial research.

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THE ILLINOIS AGRICULTURIST

ESTABLISHED 1896

Member Agricultural College Magazines Associated

OCTOBER, 1948

Volume LIII

Number 1

Published six times yearly by students in Agriculture and
Home Economics at the University of Illinois

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OUR COVER: Woodchopping was a favorite event at the Illinois Farm Sports Festival held on campus August 26-27.

OUR PLATFORM

To acquaint students and faculty in the College of Agriculture, agricultural leaders, and the rural people of Illinois with the latest scientific developments in agriculture and home economics.

To report events of general interest on the College of Agriculture campus.

To serve as a means of training agricultural and home economics students in journalism and business administration.

To promote the best interests of agricultural and home economics students on the campus of the University of Illinois.

With the presidential election only a few weeks away, you have no doubt heard the campaign speeches of each party's candidates and the platform of objectives and policies which they promise to carry out during the next four years, if elected.

Here on the University of Illinois campus, the Illinois Agriculturist has been the publication of the agricultural and home economics students for 52 years. When planning for this year ahead, we felt that if we were to continue publishing a worthwhile magazine, we must also have a platform of objectives and purposes.

In formulating our platform, we plan to establish the Illinois Agriculturist as a leader among agricultural college magazines for the purpose of performing a worthwhile service to the College of Agriculture and the rural people of the state.

To all agricultural and home economics students, this is our magazine. We invite you to join our staff. Circulation, advertising, and editorial tasks require a large number of students working together to produce a successful magazine.

To our College of Agriculture faculty, we are deeply indebted for your assistance in furnishing us with leads and information for our editorial content. We trust that you will continue to give us your willing assistance and advice which is ever needed.

To all our readers, we welcome your suggestions for improving our magazine.

To our advertisers, we express our appreciation for your patronage. Unless we have 50 per cent of our inside pages in advertising, we cannot afford to publish the Agriculturist. The more advertising that we have, the bigger and better magazine we can produce. Our goals for 100 per cent agricultural college faculty and student subscriptions will greatly increase our circulation in Champaign-Urbana, enabling us to be of greater service to our local advertisers.

Our present circulation to all high school vocational agriculture departments in the state and our plans to expand circulation among more rural people will provide us with a greater means of serving our state and national advertisers.

With definite objectives in mind, with the largest and best staff which we have ever had, and with an earnest desire to meet our goals, we hope to make the Illinois Agriculturist a magazine which you will want to read and continue to read for years to come.

FACULTY ADVISORY BOARD

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Careful breeding produces adapted inbreds for seed production



This seed corn will boost Mexican corn production

—Photos by Corn Commission

MEXICO LOOKS TO HYBRID CORN

By Bob Holbert

The problem of improving Mexico's corn production, just as it has been and continues to be here in our own United States, involves both improved soil and crop management practices, and aggressive corn breeding for hybrids better adapted to the many corn growing areas.

Five years ago the Rockefeller Foundation, implementing our good neighbor policy, initiated an agricultural research project in Mexico under the leadership of J. G. Harrar, formerly plant pathologist of Washington State College. Paul Mangelsdorf of Harvard has continued as an active advisor on corn breeding.

Harrar and Mangelsdorf succeeded in interesting E. J. Wellhausen, a former graduate student of Iowa State College, in taking charge of the Foundation's corn breeding program for Mexico. Louis Roberts, a graduate student of Mangelsdorf, has joined the corn breeding staff in Mexico.

This great corn breeding program has profited much from the good advice of Mangelsdorf; from the enthusiasm, interest and suggestions of James R. Holbert and the personnel of Funk Bros. Seed company of Bloomington, Ill.; the words of encouragement from Merle T. Jenkins of Beltsville, Md.; R. E. Buchanan of the Iowa State College, as well as Raymond Baker of the Pioneer Hybrid Corn company of Johnston, Iowa, and others.

This project has been expanded to include competent men to conduct soil studies, research for better legumes, and

both pathological and entomological phases. Many promising Mexican agronomists and technicians are being used to advantage in this work.

Corn Growing Areas

Although corn is grown and is an important food crop in all parts of Mexico, the two principal surplus corn growing areas are the Bajío and the Mesa Central. The former ranges from 4,000 to 6,500 feet in elevation and includes the states of Jalisco, Guanajuato, and part of Michoacan and Queretaro. The latter ranges from 6,000 to 8,500 feet in elevation and includes the states of Mexico, Hidalgo, and Puebla.

Agricultural development and reclamation projects now under way and contemplated will greatly increase the corn and small grain productive capacity of Mexico.

At the higher elevations, from 5,000 to 8,500 feet, early varieties of 90 to 100 days in maturity predominate. In the tropical areas at lower elevations, varieties of 150 to 180 days in maturity planted twice a year are most common. However, in the state of Oaxaca along the coast, 90 day varieties that can be planted three times a year are popular.

In Mexico practically every farmer grows at least a patch of corn to be used directly for human food, usually in the form of tortillas made from freshly ground corn previously soaked in lime water. But whether they live in the country or in the cities, people of Mexico

depend on corn as their principal food item. Therefore, a good corn crop means plenty to eat, and a poor corn crop means widespread hunger.

Average corn yields in Mexico are among the lowest in the world. These low yields are caused by seriously depleted soil fertility due to continuous cropping of corn; irregular rainfall varying from 20 to 40 inches from June to October; and a run-off of a considerable part of this water due to the low water-holding capacity of the soil.

Progress in Corn Breeding

Here's the way Wellhausen appraises the progress of the five year old project:

"That Mexico's corn production can be improved is without doubt. The method of attack is as follows: First, develop improved, synthetic varieties, and later on hybrids with high yielding capacity for the different adaptation areas. Second, develop better soil and crop management practices, as well as better methods of farming.

"With varieties that have a high yield potential, the value of fertilizer and better methods of soil improvement can be effectively demonstrated. For example, last year we had two adjacent fields, one of which had been built up to high level of fertility and yielded at the rate of 132 bushels per acre with an improved, synthetic open-pollinated variety. The other, representing a low fertility level characteristic of much of the land of the area, yielded less than 20 bushels per acre with a common local variety.

"About 12,000 selfs have been made representing many different types of corn. Early testing of lines has been the rule. Proven lines have been used in the early generations of inbreeding in the formation of synthetics and hybrids. This year approximately 300,000 acres will be planted with improved, synthetic open-pollinated varieties.

"Foundation seed was produced last winter on a large scale for double cross hybrid seed production this summer. These hybrids were made mostly with first and second generation selfed lines and are adapted to the Bajío.

"Improved synthetic varieties out-yielded the best open-pollinated varieties adapted to the same areas by at least 20 per cent. The actual increase in yield, compared to the average of the native varieties now grown in any one area, will be much higher.

"The above will give you some idea as to what has been accomplished to date. This has been made possible through the excellent cooperation of the Mexican government."

The cooperation of the Mexican government in this corn breeding project has been outstanding. The attitude of the government is well expressed by President Aleman:

"The agriculture policy of Mexico must be directed towards increased production both for those living on the public lands

(Continued on Page 11)

Higher Profits – Shorter Hours

By Jim Stokes

Steps are now being taken at the College of Agriculture which will ultimately help dairy farmers to increase their profits through higher quality products and, with greater efficiency, spend less time doing it.

The department of agricultural engineering is cooperating with the U. S. department of agriculture in an exhaustive program of field research. This research is designed to determine the basic requirements of a quality-producing, efficient dairy farm. The research workers are collecting data from representative farms scattered throughout Illinois. This study is not completed as yet, but some facts are appearing. When the work is completed, a full report will be made by the College.

Is a stanchion barn or a "parlor" type layout the most economical and efficient? Where should feed bins, silos, and milk houses be placed in reference to the dairy barn? Is it wiser to build a new barn or remodel an old one? These are just a few questions a prospective dairyman might well ask himself before making plans. These same questions are among those which University research workers have set out to answer. Now they are finding those answers.

The Need for Research

Certainly there is an urgent need right now for such a research program. With products such as oleomargarine coming into their own on the market, dairy products will, in the future, have to compete solely on a quality basis. To continue selling milk and milk products, the dairyman must make quality his yardstick. Better milk means more profits, but one of the requirements for better quality is a cleaner, more efficient dairy farm. The dairyman who has cut his feeding, milk-

ing, and cleaning-up time to a minimum, can afford to spend a little extra time in the milk house washing his utensils extra-carefully and handling his milk extra-safely.

World War II started the trend toward less labor and more machinery. Even now men are leaving the farm every day in favor of industry. So it is important, now more than ever, that the dairyman get the most out of his private industry with the least possible amount of labor. That means just one thing—greater efficiency.

Even though costs are high, this is probably a good time to consider building or remodeling the dairy barn. A good dairy cow today will buy more buildings and equipment than she ever could before in our history. Building materials and dairy equipment are at last available. Dairymen are going to want to build or remodel, and they will want to know how it can be done easily and reasonably. They are going to want to know what kind of a dairy will be most efficient, convenient, and profitable, and at the same time help them put a grade-A product on the market. Now, research is stepping in to give them a hand.

Research Procedures

To collect their information, University research workers covered the entire state of Illinois, seeking out typical dairy farms to play the part of guinea pigs in their study. County farm advisers and local creameries provided information on dairies which might contribute to the study. Here is the way a typical farm might be examined.

Once Bill Jones' dairy has been selected, the first job is to make a scale layout of Bill's farm. The layout plan is

then divided up into different sections corresponding to the various chores Bill must perform in his regular routine. This is done because the research workers are interested in how far the operator walks and how much time he takes in each specific job—feeding, milking, carrying the milk to the milk house—as well as the over-all totals.

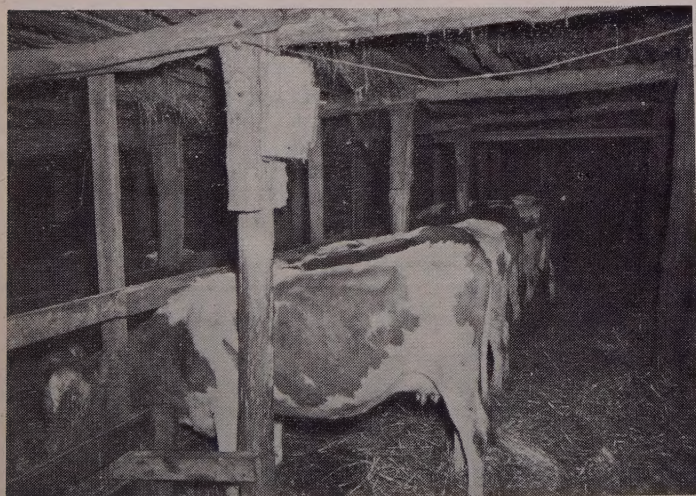
With his layout plan before him, the research worker then follows Bill as he proceeds from one chore to the next, noting carefully on the plan every step that Bill takes. Another man, using a stop-watch, times Bill's speed in doing those chores. He wants to know exactly how much time is spent in operating the milking machines, stripping, waiting on the machines, and carrying the milk to the milk house.

Plotting Analysis Charts

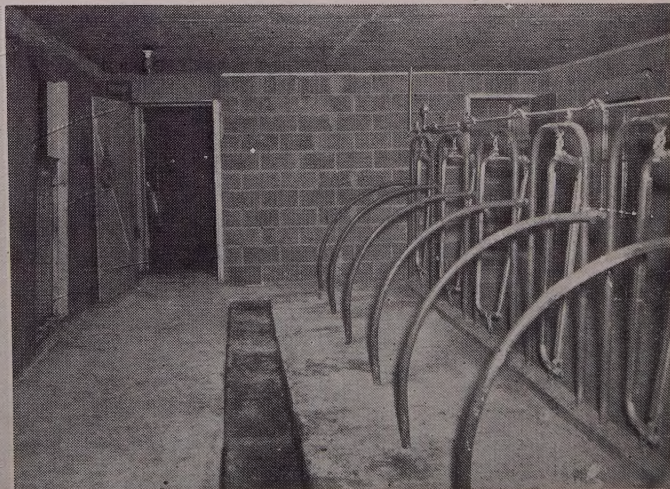
After all the desired data on Bill Jones' dairy farm has been collected and taken back to the University office, the time-travel analysis chart is then carefully drawn up and entered in a large loose-leaf note book under Bill's name. Several photographs are included with the map. These photographs show the general layout of his farm and, perhaps, some specific internal features of his dairy barn. In this way the research men have at hand a complete picture of each dairy studied for future analysis.

In their study the research workers are particularly interested in comparing stanchion and parlor arrangements of dairy barns. Of the two types, they have found the parlor to be definitely more efficient in certain phases of work. In one typical stanchion barn the walking distances were—milking, 32 feet per cow; feeding ground feed, 29 feet per cow;

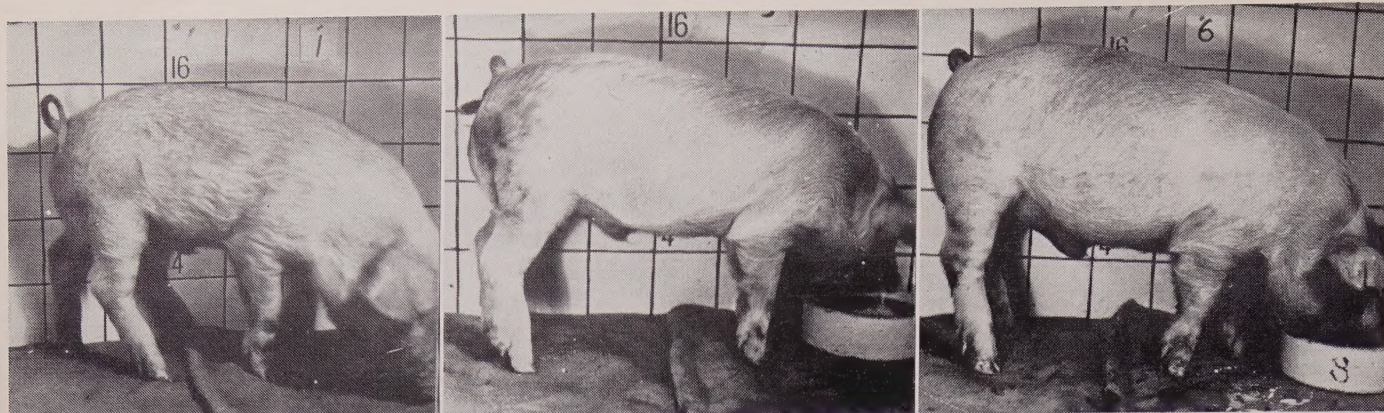
(Continued on Page 16)



Before remodeling—Inefficient stanchion arrangement



After remodeling—Efficient parlor style milking plan



—Photos Courtesy of Animal Science Department

A typical example of differences that are found by simply varying the amount of a liver extract material which is a potent source of unidentified growth factor

Pigs Need Their Vitamins Too!

By Merwyn Lindstrom

Long a question to nutrition experts, the vitamin requirements of swine are now being determined by experiments on small pigs. This work is being carried on in the department of animal science of the College of Agriculture.

The baby pig makes a good experimental subject for it increases its weight at a very rapid rate as compared with its starting or initial weight. It is not uncommon for a baby pig to weigh 15 to 20 times its beginning weight at the end of the eight weeks experiment. Thus it quickly depletes itself or uses up all of its stores of vitamins so that deficiencies become apparent in a short time.

The baby pigs are removed from their mothers at from 24 to 48 hours of age and for the next eight weeks are fed from three to five times per day depending upon age.

The pigs are fed on a synthetic diet which is of similar composition as raw milk which the pigs normally get from their mothers. The composition of the milk can be controlled so that the vita-

min which is being tested can be varied or completely omitted.

To test the qualitative needs for a vitamin, or in other words, to see if pigs need a certain factor in their diets, one needs only to include it in the diet of one group of pigs and leave it out of the diet of the other pigs.

Growth rates, appetite, and pathological changes in the blood, nerves, and liver are all used as criteria for determining the adequacy of a diet.

To study the quantitative needs for a vitamin, or to determine what amount of the vitamin should be present in the ration of pigs for optimum growth, various levels of a vitamin are included in the diets fed to the respective groups of pigs. The level of vitamin which produces the best and largest pigs is obviously the optimum level, if the quantities of milk consumed are equal.

This is hard to determine if larger pigs are used or if diets are composed of farm feeds for the content of vitamins in the feeds vary and are difficult to determine.

In addition, the pigs may be able to synthesize enough of the vitamins in the intestinal tract or they may have great stores of the vitamins in their bodies and a deficiency would not show itself so readily if larger pigs were used.

Relation to Human Nutrition

Medical science is also interested in this baby pig research, for strange to say, human infant nutrition is quite similar to the nutrition of the baby pig.

This experiment was begun in late 1946 by B. Connor Johnson of the division of animal nutrition. Since November, 1947, the pigs have been fed by A. L. Neumann, assistant in animal science.

The research work has been carried on in the animal nutrition laboratory in Davenport hall where facilities for feeding and caring for 12 baby pigs are located.

The following vitamin needs have been studied: folic acid, inositol, para-aminobenzoic acid, choline, and unidentified growth factors. During the next year the unidentified growth factors will be further studied.

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Balanced Lunches for Better Learning

By Meta Marie Keller

A good midday lunch for school children is taking its established place in the school system. It may come from the top of an old cook stove set up in the cloakroom of a one-room country school or from the glistening chromium tables in our large metropolitan high schools.

Today's school lunch program is not an entirely new idea. In 1906 England's Parliament began the first rough draft of the present day program. At that time, private funds financed the well balanced, nutritious meals for the youngsters. The serving of these meals often lasted throughout the summer vacation. Sometimes much that had been gained would be lost when the good, well planned meals were discontinued. Child malnutrition was met in a similar way in Puerto Rico and in many of the Central and South American countries.

The United States was rather slow in doing anything—nobody seemed to care where or what school children ate. There was just a lot of preaching about school lunches. Many students would take their meal to school and the teacher would heat it.

School Lunches in America

The national school lunch program was born during the depression. During those dismal days of the 1930s there were scores of idle men and women and plenty of farmers with bumper crops but no market.

The Department of Agriculture bought some of the surplus food and gave it to the youngsters for noon-day lunches. This plan began doing more than just meeting an emergency economical need—it was also aiding our national health. Adult disabilities can often be traced to nutritional deficiencies in childhood and youth. America was recognizing the need for proper eating habits of their plentiful food supply.

From the growing recognition by parents and school administrators of the importance of school lunches in developing stronger, better educated citizens there arose the National School Lunch Act.

All of the states and territories have agreed to participate with the Department of Agriculture and use the funds allotted to them. Congress will assist the states in providing an adequate supply of foods and other facilities for the establishment, maintenance, operation, and expansion of the non-profit school lunch program. The states assume the primary responsibility for developing this program. Beginning this year, the state departments of education will head the program.

No set amount of money is to be appropriated to defray the food costs but limits have been set up to the amount to spend for equipment.

For every dollar of federal funds granted to the states, the law requires that the states must spend a dollar. Food and labor supplies must also be matched. In the states where the average income is below the national income, the dollar to dollar requirement is proportionately decreased. The money is divided among the states on the basis of the number of school children it has, that is, the children of the ages 5 through 17. No money is allowed to the states for administrative purposes.

School Lunches for Illinois

Illinois appropriated additional money to add to the matched federal and state funds. In Illinois, each county superintendent of schools acts as the sponsor or business manager of the funds in his county.

This aid will safeguard the health and well-being of our nation's children and will encourage the consumption of nutritious agricultural commodities. This program is looking toward the future of greater food abundance, so that food will

not be wasted and the people who need it may get it.

Meal standards of various types have been set up by the Department of Agriculture so that the pupils are guaranteed good, nourishing meals. The amount of money a school can collect for aid is determined by the number and the type of meals served.

Meals May Vary

The type A meal is a complete lunch that provides one-third to one-half of the child's daily food needs. It includes: one-half pint of whole milk to drink; two ounces of meat, poultry, or legumes, or one egg; three-fourths cup of fruits or vegetables; at least one serving of whole grain or enriched products; and two teaspoons of butter or fortified margarine.

If cooking facilities are limited and the meal can be supplemented with food from home, a type B lunch may be served. The quantities of food in the type A lunch are slightly reduced, or the foods may be combined into a one dish meal of soup, stew, salad, or a combination dish.

If the above two meals cannot be served, another, type C which only includes one-half pint of whole milk to drink, is served. The school may ask for federal reimbursement of 9c for type A, 6c for type B, and 2c for type C.

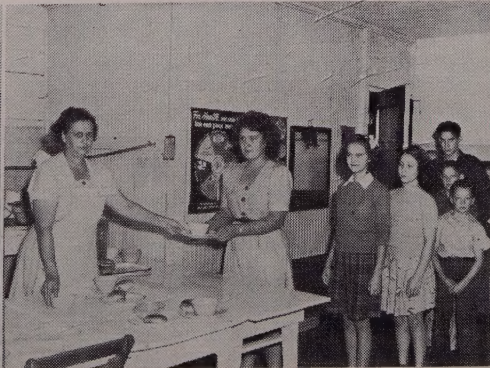
Many schools are still in the primary stages of beginning this program, others are well on their way toward expanding and improving their facilities. This aid will reach many more children this year. No pupil may be discriminated against because of an inability to pay for his lunch. Free lunches are given to those who can't afford to pay.

Under the present plan, the Illinois department of education allocates the funds and supervises the work. That department works in cooperation with the University extension service—our Farm

(Continued on Page 8)



First we wash!



We're ready now!



Mmm, but it's good!

BUTTONS: YESTERDAY AND TODAY

Let's get out the old button box, dust it off, and find those old bone buttons that we snipped from Grandfather's long underwear. Today's new look is using many ideas of years ago, including buttons. The buttons that were saved then will come in handy now.

A search of the button box yields many interesting items for you as a seamstress or as a button collector. The fascination for collecting buttons has grown so that now, collecting buttons is the third largest hobby in the United States, surpassed by only stamp and coin collecting. Old buttons are a convenient and comparatively inexpensive antique—seldom costing more than \$5-\$25. They are simple to store, there is no depreciation, there is a great variety and they are quite usable.

There is a great fascination in the forms our buttons assume. The intricate design of jet and plastic buttons readily equal the jeweled or the wrought gold and silver buttons. The humble cloth-covered button ranks high, especially if the cloth is combined with metal, china or jet. Color and daintiness are found in the clear glass and opaque china buttons. Or a prize possession may be a cloisonné, porcelain or cameo button from Italy. The loveliness of design and coloring make pearl buttons a ready favorite. No two pearl buttons ever seem to be quite alike.

There are brass military buttons; buttons that carry the portraits of famous people or cleverly relate Biblical stories and Grecian myths. Yes, almost anything imaginable can be found on buttons. There is even the lithograph button that has publicized our political campaigns for over a century.

There are histories and tales for each button. You may have one of the brass buttons that held up the suspenders of an early American soldier or a tarnished brass button from an army coat in the Spanish American War, or the Civil War. You may have a jeweled masterpiece from one of the European courts. It is a proud owner who has one of the originals created by Paul Revere, who was one of our early American silversmiths.

Buttons being used as fasteners in dress is a recent convenience. It wasn't until the 16th century that buttons were in general use on everyday dress. During the Bronze age, button-like discs or knobs were used as ornaments. As civilization advanced the Romans and Greeks fastened their clothes with pins, buckles and brooches, but the thought probably never occurred to them to solve their clothes-fastening problem by pushing a button through a slit or a loop.

In the 1700s button manufacturing flourished in Europe. All of the shaping and decorating had to be done by skilled craftsmen—one button at a time, resulting in very expensive buttons. They were

seldom discarded but were used again and again. Many wills were made leaving buttons as well as jewels to the sons and daughters. Francis I of France is known to have had 13,600 buttons on a single coat. Louis XIV had a fabulous amount of jeweled and diamond studded buttons.

A more recent king, Edward VII of England, contributed to modern button usage. The King was slightly on the stout side and found a great deal of pleasure in eating. One thing was wrong. He was a proper man, and where his vest fit him before dinner it was tight and uncomfortable afterwards. For post-dinner comfort he had to unbutton the low-cut button.

This did not speak well for the royal tailor's craftsmanship so he sought to introduce the unbuttoned last button as the smart thing for a gentleman's vest, and to save the King embarrassment. This became the fashion, the last button on the man's vest not being made to button. This serves as a memorial to the King's waistline and helps make the history of buttons a colorful record of the needs and fancies of kings and commoners for the past centuries.

Buttons today are used in a variety of ways. Two buttons fastened together form a clip or are put on earrings to make complete sets. They also solemnly march up the front of a double breasted bodice, or a row of tiny, tin buttons gaily run up the front of a tightly buttoned jacket. Leather buttons on tweed are just the thing for this fall's look. Gold, silver, and ornamented buttons on jackets, tailored, semi-tailored and dressy garments are in good taste and are also eye-appealing.

So, there is truly no forgotten button, unless it is the one we forgot to sew on!

IS IT CURTAINS FOR YOU?

By Rosemary Archibald

You have a problem! You've suddenly realized that although windows are very handy to let in air and light and attractive views, decorating them can be quite a trial. The situation always seemed disposed of with ease before, but somehow as you sit staring at undecorated windows without a single inspiration as to some way to cover them, the problem attains gigantic proportions. However, it is simple to solve.

You must first decide if you want the curtains and draperies to camouflage the hard architectural or badly proportioned lines of the window; to complete the decorative scheme by repeating the colors and materials used elsewhere; or to frame a beautiful view. Your curtains can do all three so let's let Mr. Imagination help us along.

First we'll attack that double-hung or

sash window in the bed room. Here your individual taste and preference is going to give the room that special personal touch. Long curtains will give the room an air of formality. Since we want this room to be informal, we'll use sill-length curtains with bright apron-length draperies. Venetian blinds or shades, or draperies, or both may be used to insure you of privacy. If shades are used they should be the same color as the main background color in the room.

Short Windows

That was easily solved. Now let's tackle that short wide window in the dining room. Its width makes the room look low-ceilinged. We should emphasize vertical lines to increase its apparent height. Ruffled curtains could be used; we could place a cornice board on the wall above the window; or we could use draperies. Longer vertical lines will result from draperies reaching to the floor, so we'll use that method to solve our problem.

If we intend to disguise that tall, narrow window in the hallway we're going we want to addN j? ?m;- cmfwy anmfa to have to reverse the procedure. Now we want to add width and have very few up and down lines. First we'll have a valence. To this we'll add full draperies that reach to either the sill or the apron. You may even extend the curtain over the wood trim at the side of the window. Who would know that this creation was once an unattractive pencil-slim window?

Unit Windows

Now with all this experience in decorating, the next problem will be a cinch. The living room prize—3 windows forming a bay should be treated as one unit. Cover the wood trim separating the windows with either the curtaining material or in some other inconspicuous way. Otherwise, decorate these windows as you would any others. It all depends upon the effect desired.

Yes, the treatment depends upon the purpose and the shape of the window, moreso than the prevailing high style. Naturalness in your planning will entail a charm that captivates. You'll enjoy it more than if you just follow the crowd!

BALANCED LUNCHES . . .

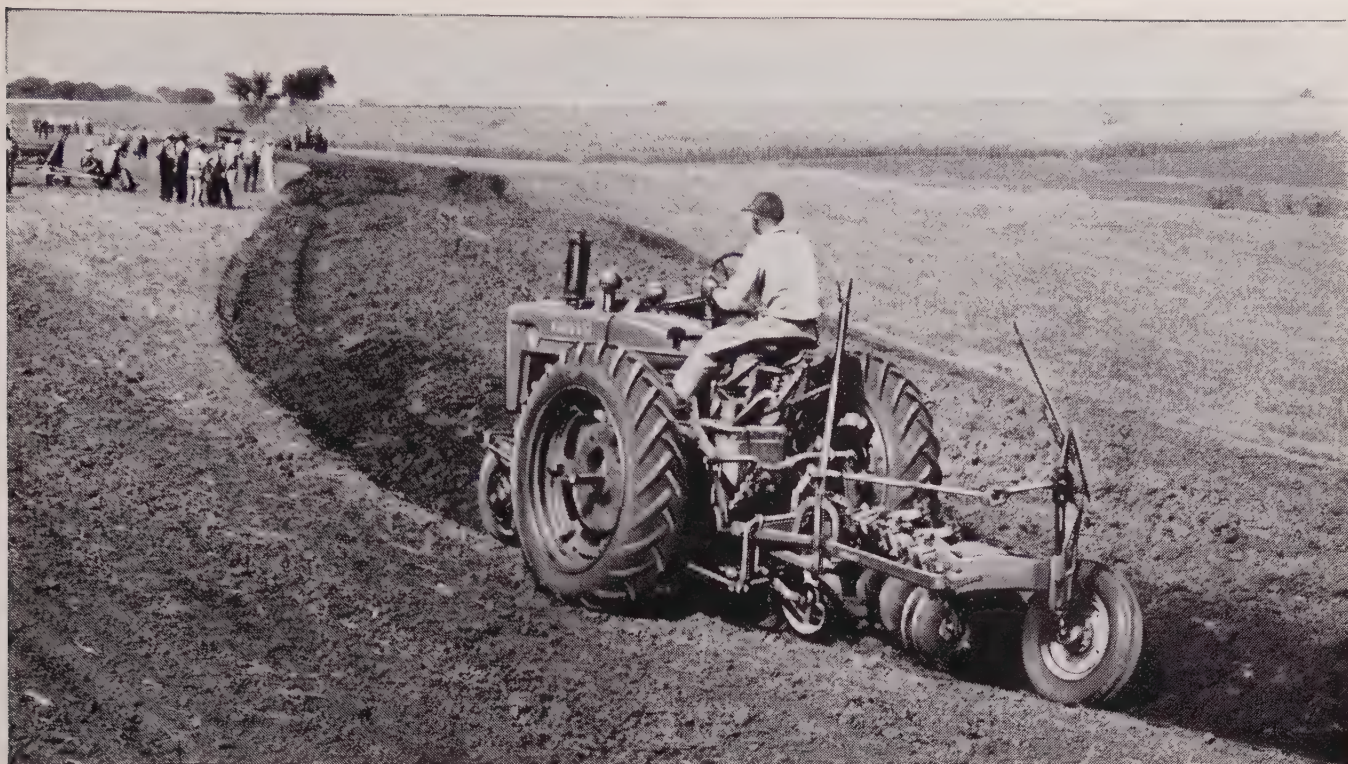
(Continued from Page 7)

and Home advisers and the extension educational program.

Results of School Lunches

It takes more than books, desks, children and a teacher to make the best school. Pupils who have received school lunches have gained in health and improved in scholarship. Absences due to illness have been cut down in many cases. The children learn good eating habits and take the practical lessons they have learned about good nutrition home to their parents.

A complete midday lunch is helping school children grow in both mind and body. Better learning follows better food.



Your Farm Equipment at Home Can Conserve Soil... Save Cash

The dramatic Face-Lifting demonstrations, presented by Soil Conservationists, reveal a quick panorama of the program's scope. In one action-crammed day, an erosion-gutted farm is reclaimed and prepared for conservation farming.

There you see the big Diesel crawlers with bulldozers or carry-type scrapers doing the heavy work—filling deep gullies, straightening creek channels, grubbing stumps. Then you watch Whirlwind terracer outfits, along with Diesel-powered motor graders, build terraces speedily.

On your farm, you can do your own "face lifting," with Farmalls and *regular farm equipment*. Fitting contour strips for cropping. Preparing

waterways for grassing. Renovating old pasture sod. Proving what conservationists teach: *that the farmer's own equipment can follow-up to develop a conservation program now—and make it succeed from then on.*

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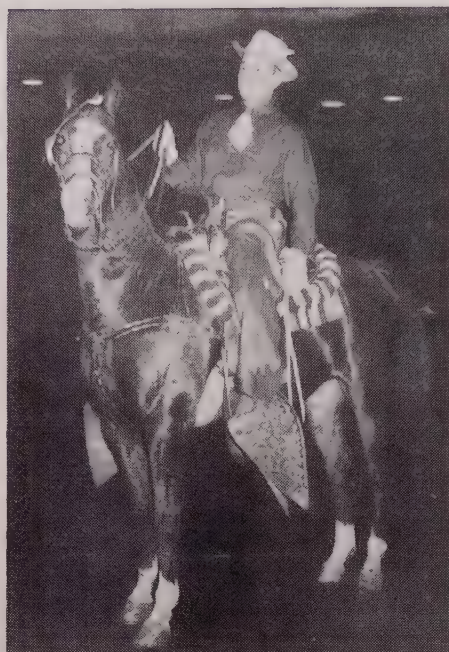
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MEXICO LOOKS . . .

(Continued from Page 4)

and for independent operators. The aim must be the attaining of food—corn, wheat, beans—in sufficient quantity and quality to satisfy the needs of the country."

Corn Commission Established

In a well planned and determined effort to translate the results of research into adequate supplies of adapted hybrid seed, along with the introduction of better methods for soil improvement and soil conservation, and an improved agriculture, President Aleman established the Corn Commission by presidential decree, January 6, 1946.

Senator Gabriel Ramos Millan, an able and successful business leader interested in better agriculture, heads this commission. The staff of the Corn Commission, through the Office of Special Studies, a separate corporation, cooperates very closely with the Rockefeller Foundation.

Already very sizable quantities of seed of improved, synthetic varieties have been produced and distributed. This year the Commission, to meet the demand for this higher yielding seed, hopes to produce between 200,000 and 300,000 bushels of double cross hybrid seed for distribution and use in 1949.

Several new hybrid corn processing plants and seed storage buildings are now under construction to handle this production. The main plant will be located at Cortazar, Guanajuato.

The Corn Commission has a most difficult assignment. The worthy objectives and determined efforts of the men in the Commission constitute a great challenge. Although success may not come as rapidly as hoped and planned, yet progress to date is most encouraging.

CLUB PRESIDENTS SEND GREETINGS

Welcome fellow Home Ec Students!

The school bells are ringing again for all of us—freshmen, sophomores, juniors and seniors—all of us who are furthering our work in home economics. You have come here to Urbana to do the best you can in your academic work, but you also have the opportunity to participate in an activity in the home economics department—the Home economics club.

Membership to the club is for any and all girls interested in Home Economics. At each of our monthly meetings a different phase of home economics is studied: through tours, debates, round-table discussions and movies.

This year in November, we will observe Miss Isabel Bevier's birthday by having a combined meeting with the whole home economics department.

You know, Miss Bevier was the founder of our home economics department here on the campus. The year's activities will be concluded with our annual banquet in May. The new officers, scholastic and other awards are announced then.

All ag field day held in the fall is a campus sports festival; the big event of the springtime is the Plowboy prom when gingham and overalls reign at Huff gym. No home ec or ag student misses any of the above events.

So you see, the home ec department believes that "All work and no play makes Susie a dull girl"—we have our play along with our studies.

I hope you're enjoying the beginning of the school year and I'll be seeing you on the campus and at the Home ec club meetings.

Sincerely,
Meta Marie Keller
President, Isabel Bevier Home
Economics Club.

Welcome ag-club members!

When you signed as a member, you took the first steps toward making the Agricultural club and the specialized clubs the most influential and worthwhile they have ever been.

Plans have been made for some of the activities of the club. Among the feature events on your ag club calendar will be the All-ag field day, the Plow boy prom, and the Christmas party; all of which will be jointly sponsored by the Home ec and Ag club. There will also be co-recreational meetings with the Home ec club. (Those lucky girls, or rather I should say we lucky fellows.)

This year we hope to launch a new type of event for the benefit of ag club members. This will be the sponsoring of noted lecturers and special programs for the entire University campus.

Each specialized club is also planning a very attractive program. Such events as the Little International and the judging contests are thus sponsored. The All-ag banquet which culminates the judging contest is an event we always look forward to.

These are only a few things that we as members will be doing. Let's not stop here. It will take a lot more work from each of us to put these plans over. If you can help with one of these events or have ideas concerning them or other undertakings, let one of the officers know of your wishes.

Remember, the club is only as strong as its members. We need you as active members to increase the service and influence of our club. Sincerely,

Keith Shertz
President, Agricultural Club

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Around the Corner on Green Street

History of Davenport Hall

Few University of Illinois buildings have a more interesting and romantic past than does Davenport hall, known to most students as the old agricultural building. Its roots go back beyond its building date of 1900, to Abraham Lincoln, to the Morrill act which established land grant colleges, and to the very beginnings of vocational education in the United States.

Built in 1900, when the student body of the college of agriculture numbered about the same as the agriculture faculty—which had just been increased to 12—Davenport hall has witnessed a phenomenal growth in the college of agriculture at the University. In size, influence, and scientific knowledge, the college of agriculture today is to the agriculture school of 1900 as is a 16-foot, self-powered combine to a man with a scythe.

Largest Ag Building

Today, as one of the oldest campus buildings, and small in size when compared to the new University buildings, Davenport hall is almost looked down upon by campus newcomers. Yet, when first constructed, Davenport hall was spoken of as "the largest building used solely for agricultural purposes in the world." It was the culmination of a life long dream carried by Jonathon B. Turner, acknowledged father of the Morrill act, and thus, indirectly, of the University of Illinois.

Turner had preached the gospel of higher industrial training for farmers and mechanics since his arrival at tiny Illinois college, Jacksonville, Ill., in 1833. When Abraham Lincoln was campaigning for president, Turner had obtained from him a promise to sign a bill containing Turner's aims, should Lincoln ever be elected president. The bill, under the name of Rep. J. S. Morrill, had been introduced in Congress in 1857, but was vetoed by President Buchanan, a Southerner who thought it would encroach upon state rights.

On July 2, 1862, the Morrill bill, which was to provide states with means of establishing schools of agriculture and mechanical arts, was finally signed by Lincoln. In 1867, the Illinois Industrial university, as it was then known, was founded, in a marsh between the hamlets of Champaign and Urbana. Turner's dream was beginning to be reality.

Early Ag School Weak

The little college got off to a bad start. Gradually it grew in size and reputation. It changed its name to the University of Illinois. But the agriculture school lagged behind.

The agriculture school in a state university of a farmers' state couldn't seem to make itself useful. Twenty-five years after its founding it had only seven stu-

dents enrolled. But then, it had little to offer. It had no real space of its own for equipment and experiments. Crowded into University hall with most other departments of the University, the departments of the University, the agriculture education facilities were at most a few chairs and a blackboard. Professors could not teach, and students could not learn the complex science of agriculture in such meagre and cramped surroundings.

Improvements Begin

Then things began to happen—fast. A new man, Eugene Davenport, took charge of the agriculture department in 1894. At about the same time, a real interest in furthering the teaching of scientific agriculture was started among farmers' organizations. Finally, in 1899, the legislature, with strong farm backing, appropriated \$150,000 for the construction of a new building at the University, to be used exclusively for agricultural purposes.

The building was to be impressive. It would stand alone, among the experimental plots south of the campus proper. It was to be really four buildings, connected with corridors, each building as large as the original building housing the entire University. It would cover two acres of ground, be a quarter of a mile in circumference, and have facilities for handling every phase of agricultural study and research. The finished building is still said by many to be the most beautiful on the campus.

Growth of Ag College

When this building was planned there were 19 students and six instructors in the college of agriculture. The planners must surely have been optimists.

Five years after completion of the building, there were 430 students, 15 years later 1,257, and today, a faculty of 340 and a student body of 1,500 cram this building and Mumford hall. Hardly a farmer in the state is unaffected by discoveries made and practices recommended by this agriculture college. The name of the college is known and respected by agriculturalists around the world.

And this mushrooming growth dates

almost exactly from the building of Davenport hall.

It is perhaps too much to credit the old building with being the cause of this phenomenal growth. Dean Davenport, and the great men who worked under him were responsible for actual improvements and contributions. President Draper, head of the University during that period, was an enormously stimulating figure to the University and to the college of agriculture. The people of Illinois were awakened to the benefits they could receive from a developed science of agriculture, and contributed money and gifts freely.

Ag Building Credited

Yet, shortly after moving into the building which would one day bear his name, Dean Davenport said, in an article written for the Illinois Agriculturist of 1901, that the "... inspiration in such a building, ... combined with the sense of consequence and responsibility arising from such surroundings, cannot but induce better work, and a higher record ... Only time will fully demonstrate the effect of all this on the student body, agriculture at the University, and betterment of people over the state."

Perhaps it is better not to pass judgment one way or another, but merely to observe what has come to be, and be thankful.

The rededication of the building, and changing of its name to Davenport hall in 1947, was perhaps a recognition of the joint parts the building and the dean played in advancing agriculture.

Interesting Changes

Many interesting changes have occurred in the building itself. More than \$100,000 in improvements and changes have been spent on it since 1900. A large part of the college of agriculture has been moved from it to Mumford hall, which was built in 1923.

In 1901, the four sections of the building were used as follows: main portion, for class rooms, offices and laboratories; one wing for farm machinery; one for stock judging; and one for dairy and domestic science. The space in the center was an open quadrangle.

Today, the dean's office, on the first floor of the main section, is occupied by the University photo laboratory. The farm machinery rooms are now used as agronomy classrooms and laboratory

(Continued on Page 14)



Davenport Hall shortly after completion



Davenport Hall as it looks today

DAVENPORT HALL . . .

(Continued from Page 13)

rooms. The stock judging arena, with its tanbark floor, is gone, and in its place are the meat cutting rooms. Domestic science has moved to Bevier hall, but the dairy science equipment, much augmented, is still in its original setting.

The quadrangle has been filled with a fifth building. Experiments in animal feeding, and other laboratories fill its space. There is even a weather station located in the building.

Innumerable small items in and about the building attest its age, its history, and importance.

It takes a sharp eye to notice it, but all the original doorknobs have a crest on them, in the form of a star with a UI inside it. This was the University symbol at the time of the erection of the building.

Quotations on Exterior

A quotation of Jonathon Turner is inscribed in terra cotta relief near the front entrance, to the left of the columns that frame the entrance. It reads, "Industrial education prepares the way for a millenium of labor."

A quotation of President Draper is inscribed to the right of the front entrance. It says, "The wealth of Illinois is in her soil and her strength lies in its intelligent development."

Turner is again acknowledged in the front hall, where a bronze tablet, commemorating his service to the furtherance of scientific education by helping found land grant colleges.

Morrow Hall

The large lecture room on the second floor is called Morrow hall, and is named after the dean of agriculture who preceded Dean Davenport. Although

under Dean Morrow the college did not show the phenomenal growth it later did, yet under the leadership of Dean Morrow some immensely valuable contributions to agriculture were made. The Morrow plots, oldest test plots in America, which he began in 1876, will alone keep his name alive in the memory of agricultural scientists.

Turner, Morrow, Davenport — the names of these men who were so important in Illinois agricultural development are inextricably bound up with the cold brick and mortar of Davenport hall, the old agriculture building. In it they have their memorial.

Vet College Studies Causes Of Pneumonia In Pigs

Pneumonia has been causing considerable loss among Illinois swine herds since last spring, says Paul D. Beamer, assistant professor of veterinary pathology and hygiene, University college of veterinary medicine. Although the death toll has not been great in any one herd, profits are being reduced and valuable meat wasted.

This increase in pneumonia may be due to wet, cold weather during farrowing last spring. Many swine breeders were not prepared for the adverse weather, and some pigs have had coughs and other respiratory disturbances since that time.

During August the laboratories of the veterinary college diagnosed pneumonia as the cause of death of 18 pigs submitted for autopsy. In each case the pig had either died from chronic pneumonia, or his resistance had been lowered by the disease, making him more susceptible to other swine diseases.

Swine pneumonia is an infectious dis-

ease usually caused by bacteria. It often follows some form of irritation of the lung tissue, such as exposure to severe weather conditions or the breathing of dust or other irritating substances. Another type may be caused by the introduction of foreign material into the lungs as a result of improper medication.

A pig with pneumonia usually has chills and fever, accompanied by difficult and rapid breathing, commonly referred to as thumps. These symptoms are similar to those of hog cholera. A complete post mortem examination by a qualified veterinarian is usually necessary in order to distinguish between the two diseases.

Limburger Cheese—No Smell

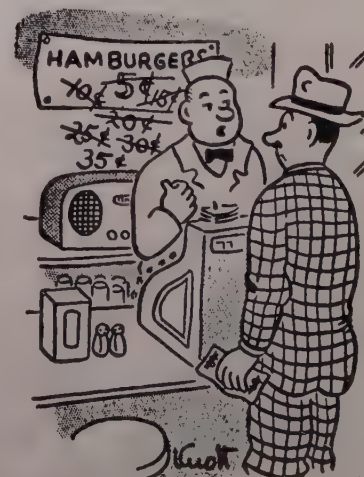
Limburger cheese without its characteristic odor, but retaining its typical taste, has been prepared by students in the University dairy manufactures department.

Secret of this success lies in complete control of the products that went into the cheese, according to Stewart L. Tuckey, professor of dairy manufactures. He stated that cheese making was considered an art in the past, but that now it is a science.

Dairy specialists believe that these new techniques will increase the popularity of limburger. The cheese made from the new process is not only odorless, but is more uniform in flavor and can be easily spread at room temperature.

Limburger cheese was first marketed in Limburg, Belgium, several hundred years ago, from which city the cheese takes its name. About seven and a half million pounds of the cheese are marketed annually in the United States.

A new variety of walnut has been developed by Ohio scientists which combines the characteristics of the meat of black walnut and the thin shell of the English variety.



"I'm waiting for the market report to determine today's price on your hamburger."

FARM LABOR EFFICIENCY INCREASES

Today's central Illinois farmer can produce almost six times as many bushels of corn per hour as his dad did before World War I.

According to the report of R. H. Wilcox, agricultural economist of the University of Illinois college of agriculture, it now takes six minutes of labor to produce a bushel of corn while back in 1913-15 it took 32 minutes.

This increased labor efficiency also carried over to the other grains. In the old days, when horses were used, 18 minutes were required to produce a bushel of oats. Now it takes four minutes. It used to take 68 minutes to produce a bushel of wheat, but today the job can be done in nine minutes. Ten minutes worth of labor will produce a bushel of soybeans now, but 30 years ago it took 49 minutes.

A farmer today can produce more because he has better machines, better crops and better methods. Wilcox pointed out that during the past third of a century there has been a "major revolution in the type and cost of farm power and machinery used on farms. Rapid progress has been made in plant breeding which has meant increased yields. Large power driven farm machines make it possible for a man to do in a day what it used to take nearly four men to do."

This more efficient use of labor does

not mean that there has been a decrease in the total cost of producing farm crops. Machinery costs are heavy compared with costs in the days of horses. The expanded use of commercial fertilizers to offset the nutrient loss also adds to production costs.

When horses were used, a farmer had to plan his operations to even out the demand for labor, power and machinery during the growing season. With modern tractors and other farm machines, he can work longer and faster. This means that he can put more of his land into high-profit crops, even though some of these crops need attention at the same time during the year.

Wade Becomes Head of Horticulture

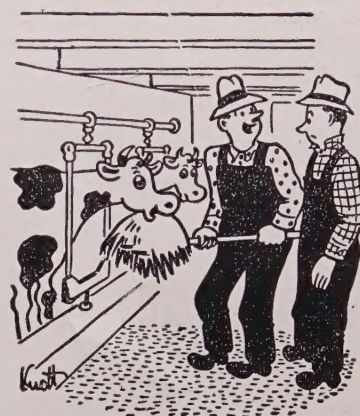
Bryan L. Wade, former director of the U. S. regional vegetable breeding laboratory at Charleston, S. C., has become the new head of the department of horticulture in the College of Agriculture. He succeeds M. J. Dorsey, departmental head for the past eight years, who retired on September 1.

For the past 12 years, Wade has been in charge of the vegetable breeding investigations of the U. S. D. A. at the South Carolina station. Previously he

served as a geneticist in commercial work and for the department in Idaho, Colorado, California, Wisconsin, and Virginia. He has developed several new disease-resistant varieties of vegetables.

Wade is a graduate of West Virginia University, holds his doctorate degree from the University of Wisconsin, and is a member of a number of distinguished professional organizations.

Dorsey retired after 23 years of service in the department of horticulture. Previously he had been chief in the division of pomology in the department, where he had taken a leading role in developing new peach varieties adaptable to Illinois and the middle west.



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To Illinois Agricultural Students

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(Continued from Page 5)

and carrying and pouring milk, 46 feet per cow. A study of an efficient parlor arrangement revealed that milking distance was 31 feet per cow, feeding ground feed, 13 feet per cow, and carrying and pouring milk, 26 feet per cow. Since the herds were of different sizes in these two examples, no specific conclusions could be drawn other than a general comparison of travel.

But time and travel are not the only considerations in choosing between a stanchion or milking parlor. A parlor requires two to three times as much bedding per cow as a stanchion setup. Therefore in localities where bedding is scarce, a parlor barn would be unwise. If a dairyman has breeding stock to display, a stanchion barn will do it to the best advantage. Thus a dairyman should consider all the factors before deciding on a definite plan.

Planning for Fewer Steps

As was explained previously, the position of the milk house, feed bins, and silos was carefully noted in each study. A surprisingly large number of dairymen have their milk house at one end of the rectangular stanchion barn and their silos at the other. An examination of the time-travel analysis of such a layout as this reveals, even to the layman, that many unnecessary steps are taken by the operator in the course of feeding and milking. Research men have found, by comparison of analyses, that an ideal arrangement is to have the milk house and silos opposite each other on the long sides of the barn instead of at the ends, with a cross-alley between the stanchion rows connecting them.

Distance between the barn and milk

house is also an important factor to consider before building or remodeling. Many dairymen have their milk house completely removed from the dairy barn. All that is usually required by grade-A laws is a ventilated passage separated from the barn by self-closing doors opening away from the milk house. Consider that on a twenty cow dairy farm the operator walks approximately 600 miles a year just carrying his milk from the barn to his milk house 100 feet away. With his milk house only ten feet from the barn, he walks 60 miles in the course of a year, saving himself a considerable amount of time and labor. Thus the dairyman planning to build or remodel should consider carefully the placement of his milk house, for, in this feature alone, he can greatly increase the efficiency of his dairy.

It has been found also that greater efficiency can be achieved with time-saving internal features. A cross-alley between stanchion rows can mean a difference of many steps to the dairyman in carrying his milk. Entrance and exit doors instead of just one door between the retaining barn and the parlor in a parlor type barn will help to avoid confusion by dividing the un milked and milked cows.

Reducing Chore Time

Chore time can be greatly reduced by planning carefully each operation, and, if there is more than one operator, developing teamwork. On one dairy farm studied two men operated four milking machines, and each carried his own milk to the milk house. When these two operators revised their working plan so that one operated two milking machines while the other prepared the cows for milking and carried the milk, they cut

their walking distance from 30 feet to 20 feet per cow.

Time analyses show that some operators spend up to two and seven-tenths minutes per cow waiting on milking machines. Many dairymen, on the other hand, have their chores so well planned that they are busy every second from the time they begin work. Those striving for greater efficiency should therefore check themselves on their "waiting" time and change their program if necessary.

Research men are mainly interested in time and travel spent on jobs repeated several times in the course of a single milking where a minute saved can mean as much as an hour or two in a week's time. It would be of relatively little value to the dairyman to increase his efficiency on a job performed only once a month or twice a year.

Putting Research in Practice

These studies now being conducted are, more or less, of a limited nature. They may not apply to the dairyman for some time. In view of this, Kieth Hinchliff, extension specialist in farm structures, is now attempting to make some of the research workers' findings useful in farm building problems on a much larger scale. With the use of questionnaires, which will soon be available to dairymen through their farm advisers, he is starting out to apply known labor-saving methods to the problems of all dairymen. These questionnaires or self-analysis charts contain a grid sheet on which the dairyman sketches his barn layout and chore routes. He also supplies data that will enable the man helping him with his problem to arrive at a fairly accurate travel estimate and thus make his recommendations. With this new plan, Illinois dairymen can have more efficient dairies—right now.

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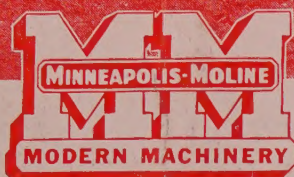
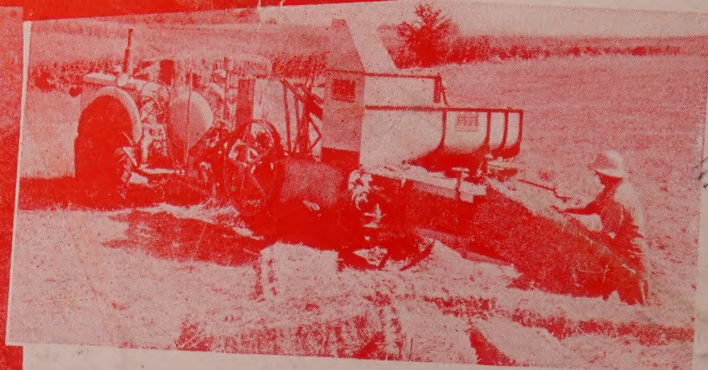
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Farmers everywhere realize that safe machinery is a big factor in their battle to reduce farm accidents. Minneapolis-Moline, wholeheartedly supporting every effort to promote farm safety, builds safety-engineered, *quality* Modern Machinery! Advanced improvements on famed MM MODERN MACHINES, TRACTORS, and POWER UNITS give simplicity and ease of operation . . . sturdier construction eliminates costly and dangerous breakdowns. *Safety, dependability, economy, and versatility* identify the world-renowned MM trademark!

HELP MAKE SURE...

THAT YOUR CUSTOMERS ARE THERE TO ENJOY FARMING WITH THE PRODUCTS YOU SELL—ENCOURAGE THEM ALWAYS TO MAKE SAFETY-FIRST THEIR WATCHWORD!

- First class maintenance and conservative operating procedure on all farm vehicles and implements!
- Continuous upkeep on all buildings . . . repairs to stairways and ladders . . . safe storage of inflammables . . . protective guards on cisterns, wells, and pits!
- Proper use of hand tools, particularly pitchforks!
- Care in handling animals, especially bulls and those with new-born young!
- Regular inspection of electrical and heating facilities!
- Training children in good, sound habits of safety!

CARELESSNESS CAUSES ACCIDENTS

MINNEAPOLIS-MOLINE

POWER IMPLEMENT COMPANY

MINNEAPOLIS 1, MINNESOTA, U. S. A.

